

# ARC WELDING MACHINE

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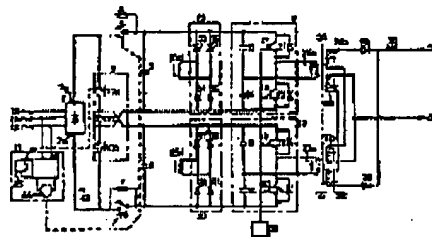
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### Abstract of JP5111766

**PURPOSE:** To reduce the size and weight of inverters and output transformers by providing a connection switching device which discriminates the high voltage and the low voltage approx. half of which of an AC power source and connects smoothing capacitors by switching in series and in parallel between DC output terminals of an input rectifier.

**CONSTITUTION:** The arc welding machine is provided with the input rectifier 2 to rectify the AC power source and the two smoothing capacitors 3 and 6 to smooth the output of the input rectifier. In addition, the arc welding machine is provided with two inverters 11 and 12 constituted of semiconductor switching elements which operate by DC of respective positive electrodes and negative electrodes of the smoothing capacitors and output high-frequency AC and output transformers 26 and 27 supplied with the outputs of both inverters. The arc welding machine is further provided with the connection switching device 42 which discriminates the high voltage and the low voltage about half this voltage of the AC power source and connects both smoothing capacitors by switching in series and in parallel between the DC output terminals of the input rectifier. Consequently, the inverter element withstand voltage is reduced, operation frequency thereof is increased and the sizes and weights of the inverters and the output transformers are reduced.



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